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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,147	08/20/2001	Maurel Francois	032326-137	1066

21839 7590 04/24/2002

BURNS DOANE SWECKER & MATHIS L L P
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER

CAPUTO, LISA M

ART UNIT PAPER NUMBER

2876

DATE MAILED: 04/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/831,147

Applicant(s)

FRANCOIS, MAUREL

Examiner

Lisa M Caputo

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with th correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disp sition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Prelim. Amdt/Amendment

1. Receipt is acknowledged of the Preliminary Amendment filed 20 August 2001.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Regarding Figure 1: PP3-PP6, CP2-CP5, LS2-LS5, DEP2-DEP5, LD2-LD5, and COS.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Regarding Figure 1, LLE with their corresponding numbers are not mentioned in the specification; Regarding Figure 2, DA is not mentioned in the specification.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: Regarding Figure 2, GNP on page 9, line 11 should be GND, as it is referred to later in the specification and on Figure 2.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 4-5, and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tushie et al. (U.S. Patent No. 5,889,941, from hereinafter "Tushie") in view of Sehr (U.S. Patent No. 6,325,292).

Tushie teaches a system and apparatus for smart card personalization. Tushie discloses that standard transaction cards such as regular credit cards are familiar to most people. A transaction card usually has information about the card holder, such as name and account number, printed and/or embossed on the surface of the card. Transaction cards frequently contain a magnetic stripe which is encoded with card holder data as well. The process of printing/embossing/encoding the card holder data on each transaction card is known as "personalization." Each transaction card also undergoes a process known as "initialization" in which certain types of information common to all cards in a batch, such as an issuer identifier and batch number, are placed on the card. A smart card differs from a standard transaction card in that a

computer microprocessor chip is embedded in the plastic of the card to greatly increase the card's data storage capacity. In some varieties of smart cards, the card manufacturer pre-loads the chip with one of several possible card operating systems and the operating system controls the programming of the chip during the personalization process. Additionally, sophisticated card applications specific to the card issuer may execute in certain varieties of the chips. The initialization data for a smart card comprises three major types of information: application data, security data, and printed data. The application data is common to all cards for a given card application and includes application program code and variables that are programmed into the chip. The security data, usually provided as secure keys or security functions, validates the data on the card and prevents fraudulent use of the card. Printed data, such as a logo, bar codes, and various types of numerical information, are printed on the surface of the card. Some or all of the same data may also be embossed on the surface. Optical technology also may be employed to make part of the surface of the smart card into a storage medium with data accessible by an appropriate optical reader. The personalization information for a smart card is similar to the personalization information currently contained on non-smart cards, such as the card holder's name, account number, card expiration date, and a photograph. Because of its increased storage capacity, the chip in a smart card may contain additional data beyond the basic information on the standard transaction card including a graphical representation of the individual's signature, data defining the types of service the card holder is entitled to, and account limits for those services, as recited in claim 8.

FIG. 1A shows components of a smart card issuing process that incorporates an embodiment of the smart card personalization system of the present invention. The smart card personalization system 100 receives data from a card issuer management system 150 (typically proprietary to the card issuer), translates the data into a data stream, and outputs the data stream to personalization equipment 130 which personalizes the smart cards 160. The card issuer management system 150 manages the card holder data and determines the type of card to issue, the card applications to embed in the card, and what personalization equipment to use to issue the card for a particular card holder. The card issuer management system is frequently a computer program as illustrated in FIG. 1A, but the smart card personalization system 100 is capable of receiving data from alternate inputs, such as a person inputting the data from a telephone keypad. The smart card personalization system 100 is illustrated in FIG. 1A as a software program executing in a computer. As described below, the smart card personalization system 100 accesses database records which define various types of cards and card operating systems, card applications, and personalization equipment. The logical functions of the software and the database may be distributed among computers in a client/server network or centralized into a single processor. The functions may also be distributed across processors connected through standard local area networks, wide area networks, dedicated phone lines or other communication means used to loosely couple processors. The software program executes under an operating system such as Unix, Windows 95.COPYRGT., or Windows NT.COPYRGT., and on industry-standard workstation and/or personal computer hardware (see Figure

1A, col 5 line 63 to col 7 line 7). It is well known in the art that client/server networks operate when the server is available and requests information, as recited in claims 1-2.

The system 100 controls card printers, embossing devices, and integrated or add-on smart card interface devices collectively represented in FIG. 1A as personalization system 130. Personalization equipment 130 also represents such devices as large volume card printer/embossers, small volume card printer/embossers, automatic teller machiners (ATMs), point of sale terminals, unattended kiosks, personal computers, network computers, and on-line telecommunication devices (see Figure 1A, col 7 lines 7 to 15), as recited in claim 8. It is well known in the art that a communication bus is used to connect customizing stations with a customizing machine.

FIG. 1B is a block diagram of one embodiment of the smart card personalization system illustrating the logical connections between the smart card personalization system 100 and functions employed by a card issuing organization to issue smart cards. Card holder data maintained by the card issuing organization contains information about each individual card holder, such as name, account number, card expiration date, and applicable services. Various ways of inputting the card holder data into the card issuer management system 150 are shown in phantom as card holder data 152 in FIG. 1B. The card issuer management system 150 may receive the card holder data on computer media, such as magnetic tape, floppy disk, or CD ROM. Alternatively, the card holder data 152 may be input through an on-line connection such as a general switched telephone network, a packet-switched network, i.e., the Internet, a dedicated line, or a

cable/satellite television signal. Additional ways in which the card holder data 152 may be input to the system 150 will be apparent to those skilled in the art. In addition to the card issuer management system 150, the card issuer typically has an existing reporting capability 154 with which the smart card personalization system 100 interfaces so that the card issuer can review statistical information maintained by the system 100. An external security source, also provided by the card issuer and shown as secure key manager 111 and secure key database 128, provides security functions that work in conjunction with the card issuer management system 150 and the smart card personalization system 100. FIG. 1B also illustrates an alternate embodiment of the smart card personalization system 100 which supports a card issuer that has add-on smart card interface devices. The system 100 directs a portion of the personalization information to the older personalization equipment 130 and the remainder of the data to a post-processor 132 in the smart card interface device 132 which programs the chip. These functions are explained in detail below (see Figure 1B, col 7 line 62 to col 8 line 12). The smart card personalization system 100 provides a customized card issuer management interface 101 to a card issuer management system 150. In this embodiment, the card issuer management system 150 passes personalization data from a card holder database 152 to the system 100. Each software module within system 100 expects the personalization data to be passed to it in a particular, internal format. Because the personalization data is in an external format defined by the card issuer that often differs from the internal format(s) expected by the software modules, the personalization data is translated by the system 100 into the internal format(s) using

the data format template. The system 100 may acquire the data format template through a data format identifier passed by the card issuer that the system 100 uses to acquire an optional data format template record 120 (shown in phantom in FIG. 1C) as illustrated by an optional connection between the record 120 and the card issuer management system interface 101. Alternatively the card issuer passes the data format template record to the system 100 instead of the data format identifier. In another embodiment, the data format template may be derived from the data in the card application record 124 that is specified by an application program identifier passed by the issuer as illustrated by an optional connection between the card application database 124 and the card issuer management system interface 101 (see Figure 1C, col 8, lines 34-59).

Regarding claim 1, Tushie fails to teach that there is a bi-directional link that connects the management interface to the customizing machine.

Sehr teaches a card system and method utilizing collector cards. Sehr discloses that this invention relates to an automated card system and methods for facilitating via a portable collector card device a plurality of services, comprising storing collectible information, security data, and other information in the collector card; loading monetary values and electronic payment forms in the card; issuing and using the card for enjoyment and other services, and for purchases of goods and services; rendering the services requested and clearing the payments made via the card; and communicating card data and related service information between and among the system entities. FIG. 1 depicts the functional components of a preferred system in accordance with the

principles of the invention. The system and methods allow the issuance of a collector card to individuals for the purpose of enjoyment or other objectives, as well as for the electronic rendering of services. To implement the system's operational tasks, commercially available hardware components and various software programs will be employed. The hardware provides the computing infrastructure and the communication data links that integrate a plurality of remote system entities including the collector card into a network. The computer software packages perform house-keeping functions, application-specific routines, networking and communication procedures, and utility tasks. This software also includes security means, such as cryptographic software programs and authenticity files, to protect the system information and card contents against fraudulent use. The hardware and software are distributed throughout the system entities including the collector card (see col 3, lines 12-41).

The CARD STATION employs a plurality of means to compile and authenticate the card contents, communicate data between the card and system entities, manipulate card data and update the system databases, and to exchange information with the card issuer, service provider, and card service center. These means comprise the database (10), collector card (11), card read/write device (12), biometrics box (13), computing platform (14), and various software programs to implement the application routines and network communication as instructed by the card station. These system components are connected via a communication link (19) to allow the exchange of data/information throughout the card station. These local components, including the card station per se, are also connected via a global communication link (1234) to the remote system

components, including the card issuer and service providers. The global data link also allows the cardholder to communicate with the system entities via a personal computer or card terminal installed at remote locations, such as the cardholder's home, a business office, or public places (see Figure 1, col 4, lines 46-65). The communication data links can be implemented via any commercially available wired or wireless technology, such as cable/telephone lines, INTERNET service networks, or other digital or analog telecommunications media (see col 6, lines 44-47).

The multimedia module (325) establishes a bidirectional data communications link between the cardholder/collector and card service center for the purpose of exchanging data, text, graphics, audio and video information; as well as for capturing and forwarding such data and information throughout the system. This module can, for example, capture and verify biometrics characteristics of a cardholder, or facilitate an interactive dialogue between the cardholder and system administrator (see Figure 1, col 7 line 63 to col 8 line 4).

In view of the teaching of Sehr, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ bi-directional communication because it is well known in the art that bi-directional communication allows for more efficient communication because the connected entities are allowed to communicate with each other directly, while using the same line. This is favorable because with more efficient communication, information can be delivered in a quicker, coherent matter.

Regarding claims 4-5, Tushie teaches that the smart card personalization system 100 provides a customized card issuer management interface 101 to a card issuer management system 150. In this embodiment, the card issuer management system 150 passes personalization data from a card holder database 152 to the system 100. Each software module within system 100 expects the personalization data to be passed to it in a particular, internal format. Because the personalization data is in an external format defined by the card issuer that often differs from the internal format(s) expected by the software modules, the personalization data is translated by the system 100 into the internal format(s) using the data format template. The system 100 may acquire the data format template through a data format identifier passed by the card issuer that the system 100 uses to acquire an optional data format template record 120 (shown in phantom in FIG. 1C) as illustrated by an optional connection between the record 120 and the card issuer management system interface 101. Alternatively the card issuer passes the data format template record to the system 100 instead of the data format identifier. In another embodiment, the data format template may be derived from the data in the card application record 124 that is specified by an application program identifier passed by the issuer as illustrated by an optional connection between the card application database 124 and the card issuer management system interface 101 (see Figure 1C, col 8, lines 34-59). The connections explained here are analogous to the connections as recited in claim 4 (i.e. the connection between the microprocessor and server and microprocessor and reader/encoder). In addition, it would have been obvious to one of ordinary skill in the art at the time the invention was made to connect

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the output terminals of an output connector of the microprocessor to an adaptation device because many times it is necessary to have an adaptation device in order to ensure a properly working system.

Regarding claim 7, Tushie teaches that in an alternate embodiment, the secure key manager 111 passes security information to the other modules of the smart card personalization system 100. For example, portions of the card holder data, such as the PIN (Personal Identification Number) code, may be encrypted by the card issuer management system 150 prior to passing the data to the smart card personalization system 100. The card issuer management system interface 101 retrieves the encryption key from the secure key database 128 through the secure key manager 111, and decrypts the data prior to encoding or programming the PIN code into the magnetic stripe and/or the chip (see Figure 2, col 10, lines 42-52).

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tushie as modified by Sehr, and further in view of Congdon et al. (U.S. Patent No. 6,151,297) and Goman et al. (U.S. Patent No. 6,196,459). The teachings of Tushie as modified by Sehr have been taught above.

Tushie teaches that the functions may also be distributed across processors connected through standard local area networks, wide area networks, dedicated phone lines or other communication means used to loosely couple processors. The software program executes under an operating system such as Unix, Windows 95.COPYRGT., or Windows NT.COPYRGT., and on industry-standard workstation and/or personal computer hardware (see Figure 1A, col 6 line 67 to col 7 line 6). This personal

computer hardware (and it's processor connected to the standard local area networks) is well known in the art to be equipped with a multi-port card in order to ensure that the customizing stations are connected efficiently, as recited in claim 3. It is well known in the art that client/server networks operate when the server is available and requests information, as recited in claims 1-2.

Tushie/Sehr fail to specifically teach that there is a computer equipped with a multi-port card.

Congdon teaches a method and system for link level server/switch trunking. Congdon discloses that a method and system are provided for trunking multiple links between a switch and a server. Server drivers recognize and automatically configure additional installed network interface cards (NICs) or multi-port NICs as group members. A monolithic driver, or an overlaying driver shim makes the group of NICs appear to be a single NIC to the server operating system and clients. Multiple NICs having the same MAC address and appearing on different ports are connected directly to a switch which treats the group as a single logical port. Using a deterministic algorithm, the switch looks up a received packet's destination in the address table. A list of possible ports for reaching the server and a flag indicating that the server is to be reached via this trunked group of ports are retrieved. The switch selects a port based upon the packet's source address. On the trunk to the clients, the server driver performs the same deterministic algorithm on the destination addresses. The invention supports fault tolerance. In one embodiment, a single switch is connected to a server via multiple NIC links. In another embodiment, the server is connected via multiple NIC links to a

plurality of switches. To mitigate effects of the same source MAC address appearing on packets received from multiple ports in a group, the switch is notified that it is acceptable to see the server's MAC address appearing on several ports and is directed not to notify the system operator thereof (see abstract).

In view of the teaching of Congdon, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a multi-port card to the computer so that many different network connections could be made at the same time, so that efficiency of data transfer will increase.

Tushie/Sehr/Congdon fail to teach that there are a plurality of customizing stations.

Gorman teaches a smart card personalization in a multi-station environment. A smart card personalization system provides an interface to smart card personalization stations and to external computing or data resources which normally are not available directly to personalization station. A card issuer management systems prepares card objects and assigns a unique card object identifier. A smart card personalization server receives the card objects from the card issuer management system. A smart card personalization controller receives the unique card object identifiers and routes the card object identifiers to waiting personalization stations. The personalization stations use the card object identifier to request data and services from the smart card personalization server in order to personalize the smart card. The services provided by the smart card personalization server include data services, security services and

support services. The smart card personalization server supports multiple active personalization station sessions (see abstract).

In view of the teaching of Goman, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a plurality of different customizing stations in order to expedite the process of personalizing cards (i.e. with more machines in use, more cards can be personalized at the same time). In addition, It is well known in the art that client/server networks operate when the server is available and requests information, which is recited in claims 1-2.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tushie as modified by Sehr, and further in view of Briel et al. (U.S. Patent No. 6,119,183, from hereinafter "Briel"). The teachings of Tushie as modified by Sehr have been discussed above.

Tushie/Sehr fail to teach a specific switching circuit for use in the system, specifically the adaptation device.

Briel teaches a multi-port switching system and method for a computer bus. Briel discloses a multi-port switching system and method for a computer bus utilizing a number of switching circuits which can be connected to any single-ported target device to provide the equivalent of a dual-ported or greater interface thereto. The switching circuits utilized in the multi-port switching system and method of the present invention can be designed to add minimal overhead to the operation of the computer bus and allow for the use of multiple switching circuits for connection of up to n SCSI initiator busses to a single target device. The number of initiator busses, n, is limited only by the

electrical characteristics of the target SCSI bus as defined in the ANSI specification. In conjunction with the SCSI bus, the minimum limitation on n is seven in all cases.

Furthermore, more than one target device may be attached to these same initiator busses through additional switches. As a consequence, the present invention will allow the use of any single-ported target device in environments where a dual-ported device is otherwise required. Moreover, it allows the integration of the latest disk drive technology (generally incorporating only a single-ported design) into storage subsystems which would otherwise require a dual-ported device. Specifically provided herein is a multi-port switching system for a computer bus operative for selectively coupling n bus initiator devices to at least one bus target device wherein the switching system comprises a plurality of switching circuits, each of the switching circuits coupled between a subset of the n bus initiator devices and the at least one bus target device. A corresponding one of the switching circuits is responsive to a selected one of the n bus initiator devices for coupling the selected bus initiator device to the at least one bus target device and generating a busy signal to a remainder of the other switching circuits while the selected one of the n bus initiator devices is coupled to the one bus target device. Each initiator bus may have one or more initiator devices coupled thereto in addition to configurations in which a single switching circuit is associated with a single initiator device. Also disclosed herein is a switching circuit for a computer bus which comprises a bus initiator interface coupling the switching circuit to at least one bus initiator device. A bus target interface couples the switching circuit to a bus target device and a switch control logic subsystem is responsive to an externally supplied port busy

signal for coupling the bus initiator interface to the bus target interface when the port busy signal is not asserted and isolating the bus initiator interface from the bus target interface when the port busy signal is asserted (see col 2 line 23 to col 3 line 3).

In view of the teaching of Briel, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a standard circuit that is well known in the art because the circuit can provide capabilities that allow an efficient manner of operation for the adaptation device.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: U.S. Patent No. 6,367,011 to Lee et al., which discloses a personalization of smart cards system.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Lisa M. Caputo** whose telephone number is **(703) 308-8505**. The examiner can normally be reached between the hours of 8:30AM to 5:00PM Monday thru Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 703-305-3503.

The fax phone number for this Group is (703)308-7722, (703)308-7724, or (703)308-7382.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [lisa.caputo@uspto.gov].

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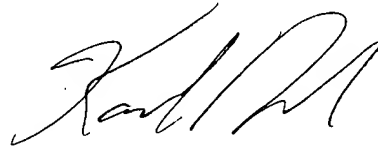
All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



LMC

April 17, 2002



KARL D. FRECH
PRIMARY EXAMINER